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# Modeling and experimental observations of radio wave propagation by reflection from the Es-layer at short radio-lines

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## Abstract

© 2014 IEEE. These The effects of focusing and defocusing at radiowave propagation through the Es-layer are frequently obtained. The large-scale cloud structure of Es layer was used to explain the effects of radiowaves focusing and defocusing by VS[1], as well as estimation of energy loss at oblique propagation[2]. Note, however, that this model can be used with a threshold level of registration not less than -35-40dB, because at lower levels the signal can be obtained by reflecting from electron density gradient and by scattering from the small-scale irregularities of the layer.

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